



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/060,154

01/30/2002

Gayvin E. Stong

10011031-1

7570

7590

05/05/2004

AGILENT TECHNOLOGIES, INC.

Legal Department, DL429

Intellectual Property Administration

P.O. Box 7599

Loveland, CO 80537-0599

EXAMINER

LUU, AN T

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/060,154

Applicant(s)

STONG, GAYVIN E.

Examiner

An T. Luu

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-5 and 11-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2:

- The limitation “said first one of said first flip-flops”, lines 7-8 and 9, lacks antecedent basis.
- The limitation “said first clock”, lines 10-11, appears to be misdescriptive since synchronization logic (i.e., 32-36) is responsive to a second clock (i.e., CLOCK A).
- The limitation “to enable data from the first and second data paths to be selectively combined”, lines 12-13, is misdescriptive since MUX 38 of figure 3 is for selecting either data from either path. Operation of MUX is not combining its inputs as shown in figures and recited in claims.
- The description of limitation “Data Out output logic”, line 15-21, appears to be misdescriptive since there is no element on figure 3 that meets the requirement of claim (i.e., Data Out output logic comprises an output flip flop).

In claim 5, the limitation “said first one of said first flip-flop”, lines 3 and 4, does not have a clear antecedent basis since it is unclear which flip-flop the recitation of claim refers to.

Art Unit: 2816

As to claim 11, it is misdescriptive for the following reasons:

- The limitation. “the synchronization flip-flop”, lines 15-16, lacks antecedent basis.
- The limitation “the first clock”, line 16, appears to be incorrect since first clock domain refers to element 31 and a second clock domain refers to elements 32-36 which is operated by a second clock (i.e., CLOCK A).
- The description of limitation “output logic”, lines 21-25, appears to be misdescriptive since there is no element on figure 3 that meets the requirement of claim (i.e., Data Out output logic comprises an output flip flop).

Claims 3-4 and 12-18 are rejected for being dependent on the rejected claims as noted above.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 6-10 and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by the Gujral et al reference (U.S. Patent 5,896,052).

Gujral discloses in figure 3 an apparatus comprising a plurality of flip-flops (3-1, 3-2, 3-01, 3-02, 3-03), each flip-flop capable of sampling data (D terminal) and outputting data only on an edge of a clock (operation of flip-flop), wherein the apparatus synchronizes data received by

Art Unit: 2816

the synchronizer from first clock domain logic (IN block) at a first clock frequency (INPUT_CLOCK) to a second clock domain logic (OUT block) at a second clock frequency (OUTPUT_CLOCK), the first clock domain logic being controlled by a first clock that generates the first clock frequency, the second clock domain logic being controlled by a second clock that generates the second clock frequency as required by claim 1.

As to claim 6, the functional recitation of this claim is considered to be inherent in Gujral because no additional element(s) of Applicant's synchronizer has been set forth in claim 6 (i.e., if there are additional elements in Applicant's invention which provides the recited function of claim 6, these additional element(s) must be put in claim in order to distinguish over the Gujral reference.

As to claim 7, col. 2, lines 63-67, discloses the frequency of the first clock (OUTPUT_CLOCK) is higher than that of the second clock. It is noted that signal (OUTPUT_CLOCK) can be interpreted as either the first clock or the second clock since the recitation of parent claim (i.e., claim 1) only calls for each domain having its own clock.

As to claim 8, col. 2, lines 63-67, discloses the frequency of the second clock (OUTPUT_CLOCK) is higher than that of the first clock.

As to claim 9, col. 2, lines 63-67 also discloses the ratio of the first clock frequency (OUTPUT_CLOCK) to the second clock frequency is 2-to-1. It is noted that signal (OUTPUT_CLOCK) can be interpreted as either the first clock or the second clock since the recitation of parent claim (i.e., claim 1) only calls for each domain having its own clock.

As to claim 10, col. 2, lines 63-67 also discloses the ratio of the second clock frequency (OUTPUT_CLOCK) to the first clock frequency is 2-to-1.

Art Unit: 2816

As to claim 19, the scope of claim is similar to that of claim 1. Therefore, it is rejected for the same reason set forth above. It is noted that figure 3 discloses a first input flip-flop 3-2 responsive to the first clock and an output flip-flop 3-02 responsive to the second clock.

As to claim 20, it is rejected for reciting a method/step derived from the rejected configuration claimed in claim 19.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

No rejection of claims 2-5 and 11-18 based on prior art is given at this point of prosecution.

Claims 2 and 11 appear to be improper because they recite parts of figure 1 and parts of figure 3 wherein the embodiment of figure 1 is different from that of figure 3. Therefore, merits of claims 2 and 11 cannot be properly determined. Figure 1 is an embodiment of an N to N-1 clock ratio data synchronizer wherein figure 3 is an embodiment of an N-1 to N clock ratio data synchronizer.

Given uncertainty as to the proper interpretation of the limitations of claims, it would not be proper to reject claims 2, 11 and their dependent claims on the basis of prior art.

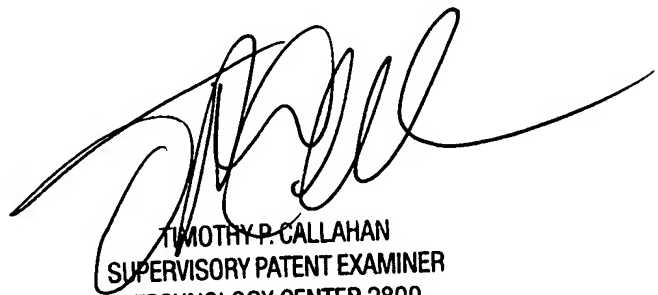
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to An T. Luu whose telephone number is 571-272-1746. The examiner can normally be reached on 7:30-5:00.

Art Unit: 2816

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

An T. Luu
4-16-04 *ATL*



TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800